Title	Stroke patients with cancer are at increased risk of recurrent stroke and cardiovascular mortality
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Visit-to-visit systolic blood pressure variability predicts all-cause and cardiovascular mortality after lacunar infarct

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Background: Both blood pressure (BP) and its variability (BPV) are established risk factors for development of atherosclerotic disease and are associated with an increased risk for cardiovascular and all-cause mortality. The prognostic implications of out-patient clinic visit-to-visit BPV among patients with lacunar infarction are nevertheless unknown.

Methods: We prospectively followed up the clinical outcome of 281 patients with lacunar infarction. The mean BP and BPV, as determined by the standard deviation of the systolic and diastolic BP, were recorded during a mean of 13 ± 6 out-patient clinic visits.

Results: The mean age of the population was 70 ± 10 years. After a mean of 78 ± 18 month's follow-up, 65 (23%) patients died, 31% (20/65) were due to cardiovascular causes. 14% and 7% developed recurrent stroke and acute coronary syndrome, respectively. After adjusting for age, sex, mean systolic and diastolic BP, cardiovascular risk factors and co-morbidities, patients with a systolic BPV of the third tertile had significantly higher risk of all-cause (hazard ratio [HR] = 1.97; 95% confidence interval [CI], 1.02-3.80; P = 0.04) and cardiovascular mortality (HR = 7.64; 95% CI, 1.65-35.41; P < 0.01) compared to those with systolic BPV of the first tertile. Nevertheless, systolic BPV did not predict recurrent stroke or acute coronary syndrome. Diastolic BPV did not predict various adverse clinical outcomes.

Conclusions: Visit-to-visit systolic BPV predicts long-term all-cause and cardiovascular mortality after lacunar infarct, independent of conventional risk factors including average BP control.

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Stroke patients with cancer are at increased risk of recurrent stroke and cardiovascular mortality

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Background: Cancer patients are at increased risk of cardiovascular and cerebrovascular events. It is unclear whether cancer confers any additional risk for recurrent stroke or cardiovascular mortality after stroke.

Methods: This was a single-centre, observational study of 1105 consecutive Chinese ischaemic stroke patients recruited from a large stroke rehabilitation unit based in Hong Kong. We sought to determine whether patients with cancer are at higher risk of recurrent stroke and cardiovascular mortality.

Results: Among 1105 patients, 58 patients (5.2%) had cancer, of whom 74% were in remission. After a mean follow-up of 76 ± 18 months, 241 patients developed a recurrent stroke: 22 in patients with cancer (38%, annual incidence, 13.94%/year), substantially more than those without cancer (21%, 4.65%/year) [P < 0.01]. In a Cox regression model, cancer, age, and atrial fibrillation were the three independent predictors of recurrent stroke with a hazard ratio (HR) of 2.42 (95% confidence interval [CI], 1.54-3.80), 1.01 (1.00-1.03), and 1.35 (1.01-1.82), respectively. Likewise, patients with cancer had a higher cardiovascular mortality compared with those without cancer (4.30%/year vs 2.35%/year; P = 0.08). In Cox regression analysis, cancer (HR = 2.08; 95% CI, 1.08-4.02), age (HR = 1.04; 95% CI, 1.02-1.06), heart failure (HR = 3.07; 95% CI, 1.72-5.47), and significant carotid atherosclerosis (HR = 1.55; 95% CI, 1.02-2.36) were independent predictors for cardiovascular mortality.

Conclusions: Cancer patients who develop ischaemic stroke are at increased risk of recurrent stroke and cardiovascular mortality.